

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A biosensor for determination of an analyte concentration in a test sample comprising:
 - a mixture for electrochemical reaction with an analyte, said mixture including an enzyme,
 - a mediator, and
 - an oxidizable species as an internal reference, the oxidizable species being different than the mediator species.
2. (Previously Presented) The biosensor of claim 1 wherein said internal reference is a reduced form of a reversible redox couple that has an equal or higher redox potential than that of said mediator.
3. (Previously Presented) The biosensor of claim 1 wherein said mediator comprises 3-phenylimino-3H-phenothiazine.
4. (Previously Presented) The biosensor of claim 3 wherein said internal reference comprises ferrocyanide.
5. (Currently Amended) The biosensor of claim [[4]] 1 wherein said ferrocyanide and said mediator are oxidized at a first voltage potential and only said mediator is oxidized at a second voltage potential, said second voltage potential being less than said first voltage potential.
6. (Previously Presented) The biosensor of claim 5 wherein said first voltage potential is about 400 mV and said second voltage potential is about 100 mV.

7. (Currently Amended) The biosensor of claim 1 further comprising a working electrode and a counter electrode wherein said mediator comprises ferriyanide.

8. (Cancelled)

9. (Previously Presented) The biosensor of claim 1 wherein said mediator comprises ruthenium hexaamine.

10. (Previously Presented) The biosensor of claim 9 wherein said internal reference comprises ferrocyanide.

11. (Previously Presented) The biosensor of claim 10 wherein said enzyme comprises glucose oxidase.

12. (Previously Presented) A method of use of a biosensor including a mixture of an enzyme, a mediator, and an oxidizable species as an internal reference, said method comprising the acts of:

applying a first voltage potential in a first period; and
providing a set delay period;

applying a second voltage potential in a final period following said delay period, and wherein said first voltage potential and said second voltage potential are selectively provided for oxidizing only said mediator or both said mediator and said internal reference.

13. (Previously Presented) The method of claim 12 wherein the act of applying said first voltage potential in said first period includes the act of applying a selected high first voltage potential in the first period for oxidizing said mediator and said internal reference.

14. (Previously Presented) The method of claim 12 wherein the act of applying said first voltage potential in said first period includes the act of applying a selected low first voltage potential in the first period for oxidizing only said mediator.

15. (Previously Presented) The method of claim 12 wherein the act of applying said second voltage potential in said final period following said delay period includes the act of applying a selected second voltage potential for oxidizing said mediator and said internal reference.

16. (Previously Presented) The method of claim 12 wherein the act of applying said second voltage potential in said final period following said delay period includes the act of applying a selected second voltage potential for oxidizing only said mediator.

17. (Previously Presented) The method of claim 12 wherein the acts of applying said first voltage potential and applying said second voltage potential includes the acts of applying a selected voltage potential in a range between 100 mV and 400 mV.

18. (Previously Presented) The method of claim 12 wherein the acts of applying said first voltage potential and applying said second voltage potential includes the acts of applying a selected first voltage potential in the first period for oxidizing both said mediator and said internal reference; and applying a selected second voltage potential for oxidizing only said mediator.

19. (Previously Presented) The method of claim 12 wherein the biosensor includes a mediator comprising one of 3-phenylimino-3H-phenothiazine and ruthenium hexaamine; and wherein the internal reference comprises ferrocyanide; and wherein the acts of applying said first voltage potential and applying said second voltage potential includes the acts of applying a selected first and second voltage potential for oxidizing only said mediator.

20. (Previously Presented) The method of claim 12 wherein the acts of applying said first voltage potential and applying said second voltage potential includes the acts of applying a selected first and second voltage potential for oxidizing both said mediator and said internal reference; wherein said internal reference effectively anchoring a calibration intercept within a narrow range and said internal reference effectively maintaining a calibration slope for the biosensor.

21. (New) A method of forming and placing a reagent mixture for an electrochemical reaction with an analyte in a biosensor, the biosensor having a working electrode and a counter electrode, the method comprising:

forming a batch of reagent mixture by adding an enzyme, adding a mediator and adding an oxidizable species, the added oxidizable species being separate from the mediator; and

placing the reagent mixture at least partially on the working electrode and the counter electrode of the biosensor.

22. (New) The method of claim 21 wherein said internal reference is a reduced form of a reversible redox couple that has an equal or higher redox potential than that of said mediator.

23. (New) The method of claim 21 wherein said mediator comprises 3-phenylimino-3H-phenothiazine.

24. (New) The method of claim 23 wherein said internal reference comprises ferrocyanide.

25. (New) The method of claim 21 wherein said internal reference and said mediator are oxidized at a first voltage potential and only said mediator is oxidized at a second voltage potential, said second voltage potential being less than said first voltage potential.

26. (New) The method of claim 25 wherein said internal reference and said mediator are oxidized at a first voltage potential and only said mediator is oxidized at a second voltage potential, said second voltage potential being less than said first voltage potential.

27. (New) The method of claim 21 wherein said mediator comprises ruthenium hexamine.

28. (New) The method of claim 27 wherein said internal reference comprises ferrocyanide.

29. (New) The method of claim 28 wherein said enzyme comprises glucose oxidase.

30. (New) The method of claim 21 wherein the oxidizable species is different than the mediator species.

31. (New) The method of claim 21 wherein the mediator comprises ferricyanide.

32. (New) The method of claim 31 wherein the internal reference comprises ferrocyanide.

33. (New) A method of use of a biosensor including a mixture of an enzyme, a mediator, and an oxidizable species as an internal reference, said method comprising the steps of:
applying a first voltage potential in a first period; and
applying a second voltage potential in a second period following said first period, said first voltage potential and said second voltage potential being selectively provided for oxidizing only said mediator or both said mediator and said internal reference.

34. (New) A method as recited in claim 33 wherein the step of applying a first voltage potential in a first period includes the step of applying a selected high first voltage potential in the first period for oxidizing said mediator and said internal reference.

35. (New) A method as recited in claim 33 wherein the step of applying a first voltage potential in a first period includes the step of applying a selected low first voltage potential in the first period for oxidizing only said mediator.

36. (New) A method as recited in claim 33 wherein the steps of applying said first voltage potential and applying said second voltage potential includes the steps of applying a selected voltage potential in a range between 100 mV and 400 mV.